Claims

[c1] An aerosol package comprising

a container having:

side walls, a bottom wall and a top wall collectively defining an enclosed chamber having a predetermine volume, the chamber having a predetermined burst pressure (P_{burst}) at a predetermined temperature (T_{burst}), and a valved outlet to selectively dispense the fluid from the container;

an aerosol propellant and a liquid in the chamber, the propellant having a predetermined vapor pressure at selected temperatures;

the liquid further comprising a predetermined concentration of a gas-producing compound that is stable in the liquid under controlled conditions but that will decompose in the presence of certain reagents to produce a gas within the chamber;

wherein the amount of the liquid of the gas-producing-compound in the container is selected to be the maximum amount of liquid that can safely be loaded into the container without exceeding at least 80% of the burst pressure of the container in a worst case decomposition scenario wherein

the gas producing compound is assumed to be completely decomposed; and

the temperature of the container and contents are at least at ambient temperatures at which the aerosol package is expected to be stored.

[c2] An aerosol package according to claim 1 wherein the temperature of the container and contents are assumed to be above the ambient temperatures at which the aerosol package is expected to be stored.

[c3] An aerosol package according to claim 2 wherein the temperature of the container and contents are assumed to be in the range of 70-120° F.

[c4] An aerosol package according to claim 3 wherein the amount of the liquid of

the gas-producing-compound in the container is selected to be the maximum amount of liquid that can safely be loaded into the container without exceeding at least 90% of the burst pressure of the container in the worst case decomposition scenario.

[c5] An aerosol package according to claim 4 wherein the gas producing compound is a oxygen producing compound.

[c6] An aerosol package according to claim 4 wherein the gas producing compound is a peroxygen compound.

[c7] An aerosol package according to claim 4 wherein the gas producing compound is hydrogen peroxide and the liquid is aqueous.

[c8] An aerosol package according to claim 1 wherein the temperature of the container and contents are assumed to be in the range of 70-120° F.

[c9] An aerosol package according to claim 8 wherein the amount of the liquid of the gas-producing-compound in the container is selected to be the maximum amount of liquid that can safely be loaded into the container without exceeding at least 90% of the burst pressure of the container in the worst case decomposition scenario.

[c10] An aerosol package according to claim 8 wherein the gas producing compound is a oxygen producing compound.

[c11] An aerosol package according to claim 8 wherein the gas producing compound is a peroxygen compound.

[c12] An aerosol package according to claim 8 wherein the gas producing compound is hydrogen peroxide and the liquid is aqueous.

[c13] An aerosol package according to claim 1 wherein the amount of the liquid of

the gas-producing-compound in the container is selected to be the maximum amount of liquid that can safely be loaded into the container without exceeding at least 90% of the burst pressure of the container in the worst case decomposition scenario.

[c14] An aerosol package according to claim 1 wherein the gas producing compound is a oxygen producing compound.

[c15] An aerosol package according to claim 1 wherein the gas producing compound is a peroxygen compound.

[c16] An aerosol package according to claim 1 wherein the gas producing compound is hydrogen peroxide and the liquid is aqueous.